MILITARY SPECIFICATION SHEET

ELECTRON TUBES, TRANSMITTING

TYPES 807 AND 1625 1/

The complete requirements for procuring the electron tubes described herein shall consist of this document and the latest issue of MIL-E-1.

This specification is mandatory for use by all Departments and Agencies of the Department of Defense.

DESCRIPTION: Amplifier, beam power. F1 = 60 MHz. F2 = 125 MHz

Outline	---	16-2 (EIA)
Base		
807	---	A5-11 (low-loss phenolic)
1625	---	A7-13 (low-loss phenolic)
Cap	---	C1-1
Envelope	---	ST16
Cathode	---	Coated unipotential

Base connections:

Pin No.		1	2	3	4	5	6	7	Cap
Element									
807	---	h	g2	g1	k, g3 (Note 2)	h	---	---	a
1625	---	h	nc	g2	g1	nc	k, g3 (Note 2)	h	a

ABSOLUTE-MAXIMUM RATINGS:

Parameter:	Ef	Eb	Ec1	Ec2	Ib	Ic1	Pg2	Pp	Pi	Ⓒ Ehk	Modulation	Alt
Unit:	V	Vdc	Vdc	Vdc	mAdc	mAdc	W	W	W	v	---	ft
Type 807												
Class B AF:	6.3±10%	600	---	300	120	---	3.5	25	60	135	---	10,000
Class B RF:	6.3±10%	600	---	300	80	---	2.5	25	37.5	135	---	10,000
Class C Telep:	6.3±10%	475	-200	300	83	5	2.5	16.5	40	135	Anode	10,000
Class C Teleg:	6.3±10%	600	-200	300	100	5	3.5	25	60	135	---	10,000
TEST CONDITIONS:	6.3	600	-29	300	---	---	---	---	---	---	---	---
Type 1625												
Class B AF:	12.6±10%	600	---	300	120	---	3.5	25	60	135	---	10,000
Class B RF:	12.6±10%	600	---	300	80	---	2.5	25	37.5	135	---	10,000
Class C Telep:	12.6±10%	475	-200	300	83	5	2.5	16.5	40	135	Anode	10,000
Class C Teleg:	12.6±10%	600	-200	300	100	5	3.5	25	60	135	---	10,000
TEST CONDITIONS:	12.6 Vdc	600	-29	300	---	---	---	---	---	---	---	---

GENERAL:

Qualification - Required

1/ See note 1

Ⓒ denotes changes

METHOD	REQUIREMENT OR TEST	CONDITIONS	AQL (PERCENT DEFECTIVE)	INSPECTION LEVEL OR CODE	SYMBOL	LIMITS		UNIT
						MIN	MAX	
	Qualification inspection							
1236	Power oscillation (2)	Power oscillation (1): F = 60 MHz	---	---	Po	28	---	W
	Quality conformance inspection, part 1		(C)					
1231	Emission	Eb = Ec1 = Ec2 = 50 Vdc (see note 3)	0.65	II	Is	300	---	mAdc
1236	Power oscillation (1)	Ec2 = 200 Vdc: Rg = 10,000 ohms: Ic1 = 6 mAdc: Ib = 100 mAdc: F = 15 MHz	0.65	II	Po	33	---	W
1256	Electrode current (1) (anode)		0.65	II	Ib	24	48	mAdc
1266	Total grid current	See note 3	0.65	II	Ic	---	-4.0	µAdc
(C) 1201	Short and discontinuity detection		0.4	II	---	---	---	---
	Quality conformance inspection, part 2							
1031	Low frequency vibration	Eb - 250 Vdc: Ec2 = 100 Vdc: Ec1 - -10 Vdc: Rp - 2,000 ohms	---	---	Fp	---	500	mVac
1036	Bump	Hammer angle = 20°	---	---	---	---	---	---
1301	Heater current							
	Type 807		---	---	If	810	990	mA
	Type 1625		---	---	If	405	495	mA
(C) 1336	Heater-cathode leakage		---	---	Ihk	---	100	µAdc
(C) 1256	Electrode current (2) (anode)	Ec1 = -100 Vdc	---	---	Ib	---	0.5	mAdc
(C) 1256	Electrode current (screen)		---	---	Ic2	0	4.0	mAdc
1266	Primary grid emission Type 807	Eg2 - 175 Vac (approx): Eb = Ec2 = 0: Ec1 = 0 to 6 Vdc: Pg2 = 5 W (see note 4)	---	---	Ic2	---	-750	µAdc
1306	Transconductance Type 1625	Eb = Ec2 = 250 Vdc: Ec1 = -14 Vdc	---	---	Sm	5,100	6,900	µmhos
1236	Internal insulation		---	---	---	---	---	---
1331	Direct-interelectrode capacitance	Shield No. 312	---	---	Cgp	---	0.2	pF
		Without shield			Cin	10.0	14.0	pF
		Without shield			Cout	5.3	8.7	pF
(C) 1216	Base material insulating quality		---	---	---	---	---	---

METHOD	REQUIREMENT OR TEST	CONDITIONS	AQL (PERCENT DEFECTIVE)	INSPECTION LEVEL OR CODE	SYMBOL	LIMITS		UNIT
						MIN	MAX	
	Quality conformance inspection, part 2 -Continued							
(C) 1101	Secureness of base, cap, or insert		---	---	---	---	---	---
(C) 1105	Permanence of marking		---	---	---	---	---	---
	Quality conformance inspection, part 3							
---	Life-test provisions	Group B: Ehk - 135 V	---	---	---	---	---	---
---	Life-test end points (500 hours)	Total grid current and	---	---	Ic1	0	-4.0	µAdc
		Power oscillation (1)	---	---	Po	27	---	W

NOTES:

1. Tube type 5933 has been deleted from this tube specification sheet. For replacement purposes use tube type 5933WA, MIL-E-1/652.
2. The beam forming plate lead and the cathode lead shall be individually passed through the glass stem of the tube and shall be electrically connected together only at the base pin.
3. This test to be performed at the conclusion of the holding period.
4. A protective resistor of 15,000 ohms shall be placed in series with the primary emission current meter. Grid No. 2 input power shall be calculated as 2.40 times the product of the rectified current and rectified voltage. Test duration shall be sufficient to obtain a stabilized negative Ic2 value.

Custodians:
Army - EL
Navy - EC
Air Force - 80

Review activities:
Army - EL
Navy -
Air Force - 11, 80
DSA - ES

User activities:
Army - MU, WC
Navy - AS, OS, MC, CG, SH
Air Force - 19

Preparing activity: Navy - EC

Agent: DSA - ES

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